

GAATTCCGGGTGGGTAGGTCGGGCAGGGTAGGACAGGCCTAAGAGAGAGGCCGGACAGACCTCC
TTTGGAAGCAGCCACTTCTGGTCCCCATCCCTGGAGCGATCGAGCGCAGGATCTGCTGTCCCAT
GGGACAGCAGATCTCTTCCCAGTGCACAGCTTCTCCTCTGCCTGTTTTCCCTGCTTCCAGTG
CTCCAGGTGGCCCAACCAGGCCAGGCACCCAGGACCAGCCCCTGTGGACACTTTTGGAGCAGT
ACTGCCACAGGACCACAATTGGGAATTTTTTCAGGTCCCTACACCTACTGCAACACGACCTTGGA
CCAGATCGGGACCTGCTGGCCACAGAGCGCACCCGGAGCCCTAGTAGAGAGACCGTGCCCCGAG
TACTTCAATGGCATCAAGTACAACACGACCCGGAATGCCTACAGAGAGTGCCTGGAGAACGGGA
CCTGGGCCCTCAAGGGTCAACTACTCACACTGCGAACCCATTTTGGATGACAAGCAGAGAAAGTA
TGACCTGCATTACCGAATCGCCCTCATTGTCAACTACCTGGGTCACTGTGTTTTCCGTGGTGGCC
CTGGTGGCCGCTTTCCTGCTTTTCCCTAGTGCTGCGGAGTATCCGCTGCCTGAGGAATGTGATCC
ACTGGAACCTCATCACCACCTTCATTCTGAGAAACATCGCGTGGTTCCTGCTGCAACTCATCGA
CCACGAAGTGCACGAGGGCAATGAGGTCTGGTGGCGCTGCATCACCACCATCTTCAACTATTTT
GTGGTCACCAACTTCTTCTGGATGTTTGTGGAGGGCTGCTACCTGCACACGGCCATTGTGATGA
CGTACTCCACAGAGCACCTGCGCAAGTGGCTTTTCTCTTCATTGGATGGTGCATTCCCTGCCC
TATCATCATCGCCTGGGCAGTTGGCAAACCTCTACTATGAGAATGAGCAGTGCTGGTTTGGCAAG
GAAGCTGGTGATTTGGTGGACTACATCTACCAGGGCCCCGTCATGCTTGTGCTGTTGATCAATT
TTGTATTTCTGTTTAACATCGTCAGGATCCTGATGACGAAGTTACGAGCATCCACCACGTCCGA
GACAATCCAATACAGGAAGGCAGTGAAGGCCACGCTGGTCCCTCCTCCCCCTGTTGGGCATCACC
TACATGCTCTTCTTTGTCAATCCTGGCGAGGACGACCTGTCCCAGATTGTGTTTCATCTACTTCA
ACTCTTTCCTGCAGTCCTTCCAGGGTTTCTTTGTGTCCGTTTTCTACTGCTTCTTCAATGGAGA
GGTGC GCGCGGCCCTGAGAAAGCGGTGGCACTCGGGGCAGGACCACCACGCCCTCCGGGTGCCT
GTGCGCCGGGCCATGTCCATCCCTACGTCGCCCACCAGGATCAGCTTCCACAGCATCAAGCAGA
CAGCTGCTGTGTGACCCTCTGTCAACCGTCTGCCCGGCAGTCCACCCTGAGGCAGCTTCTCCAT
CCTTTACAGCCTTCCCCCTGGGTCCCTTGCTACCCTGACCCACAGGTACAAGGTACAGGAGAA
GGGAGGAGAACGAACACTCCC (SEQ ID NO:1)

FIGURE 1

= deleted in targeting construct

[] = sequence flanking Neo insert in targeting construct

GAATTCCGGGTGGGTAGGTCGGGCAGGGTAGGACAGGCCTAAGAGAGAGGCCGGACAGAC
 CTCCTTTTGAAGCAGCCACTTCTGGTCCCCATCCCTGGAGCGATCGAGCGCAGGATCTGC
 TGTCCCATGGGACAGCAGATCTCTCTTCCCAGTGCACAGCTTCTCCTCTGCCTGTTTTCC
 CTGCTTCCAGTGCTCCAGGTGGCCCAACCAGGCCAGGCACCCCAGGACCAGCCCCCTGTGG
 ACACTTTTGGAGCAGTACTGCCACAGGACCACAATTGGGAATTTTTCAGGTCCCTACACC
 TACTGCAACACGACCTTGGACCAGATCGGGACCTGCTGGCCACAGAGCGCACCCGGAGCC
 CTAGTAGAGAGACCGTGCCCGAGTACTTCAATGGCATCAAGTACAACACGACCC [GGAA
 TGCCTACAGAGAGTGCCTGGA] GAACGGGACCTGGGCCTCAAGGGTCAACTACTCAGACT
GCGAACCCATTTTGGATGACAAGCAGAGAAAGTATGACCTGCATTACCGAATCGCCCTCA
TTGTCAACTACCTGGGTCACTGTGTTTCCGTGGTGGCCCTGGTG [GCCGCTTTCCTGCTT
 TTCCTAGTGCTGCG] GAGTATCCGCTGCCTGAGGAATGTGATCCACTGGAACCTCATCAC
 CACCTTCATTCTGAGAAACATCGCGTGGTTCCCTGCTGCAACTCATCGACCACGAAGTGCA
 CGAGGGCAATGAGGTCTGGTGCCGCTGCATCACCACCATCTTCAACTATTTTGTGGTCAC
 CAACTTCTTCTGGATGTTTGTGGAGGGCTGCTACCTGCACACGGCCATTGTGATGACGTA
 CTCCACAGAGCACCTGCGCAAGTGGCTTTTCTCTTTCATTGGATGGTGCATTCCCTGCCC
 TATCATCATCGCCTGGGCAGTTGGCAAACCTCTACTATGAGAATGAGCAGTGCTGGTTTGG
 CAAGGAAGCTGGTGATTTGGTGGACTACATCTACCAGGGCCCCGTCATGCTTGTGCTGTT
 GATCAATTTTGTATTTCTGTTTAAACATCGTCAGGATCCTGATGACGAAGTTACGAGCATC
 CACCACGTCCGAGACAATCCAATACAGGAAGGCAGTGAAGGCCACGCTGGTCTCTCTCCC
 CCTGTTGGGCATCACCTACATGCTCTTCTTTGTCAATCCTGGCGAGGACGACCTGTCCCA
 GATTGTGTTTCATCTACTTCAACTCTTTCCTGCAGTCCCTCCAGGGTTTCTTTGTGTCCGT
 TTTCTACTGCTTCTTCAATGGAGAGGTGCGCGCGGCCCTGAGAAAGCGGTGGCACTCGGG
 GCAGGACCACCACGCCCTCCGGGTGCCTGTGCGCCGGGCCATGTCCATCCCTACGTGCGC
 CACCAGGATCAGCTTCCACAGCATCAAGCAGACAGCTGCTGTGTGACCTCTGTACCCGT
 CTGCCCCGCAGTCCACCACTGAGGCAGCTTCTCCATCCTTTACAGCCTTCCCCTGGGTCC
 TCCTTGCTACCTGACCCACAGGTACAAGGTACAGGAGAAGGGAGGAGAACGAACACTCC
 C

FIGURE 2A

Gene Sequence Structure *

441 bp

Sequence Deleted

582 bp

Size of full-length
cDNA: 1557 bp

Targeting Vector* (genomic sequence)

Construct Number: 3050

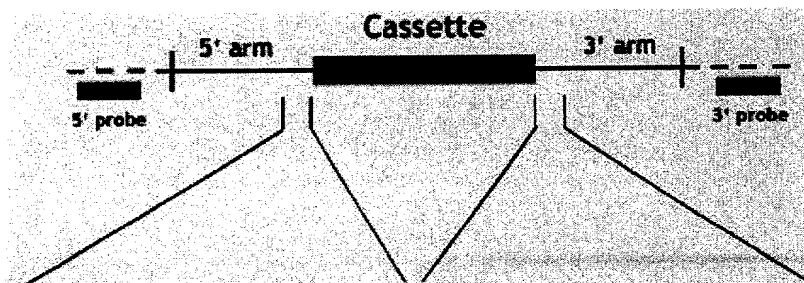
Arm Length:

5': 3.1 kb

3': 2.5 kb

LacZ-Neo

Cassette



————— Targeting Vector
- - - - - Endogenous Locus

* Not drawn to scale

5' > AGCCCTATGTGTAATTTTCAT
ATAAATGACTCATATTAGCTTTCA
GATATGCATTGTGTTTCAGGTCT
GGGAGAACTAAGGAGTGTGGACCT
TATCCTGCAGGTACTAGGGAGCCA
GGGAGGGCTTTTGAGGCGGGAGGG
CGTCCTGACTCTCAGTGGTTGGCA
TC'TTCTCTAGGGAATGCCTACAGA
GAGTGCCTGGA<3'
(SEQ ID NO:2)

5' > GCCGCTTTCCTGCTTTTCCTA
GTGCTGCGGTGAGTCCACCTCCAC
CCTGCTTCCTCCTTGCTTTGCCT
CTCCCAGACATTGTCTCTTCCATT
CTGGGGCCCCGGGAACAGTAGCCA
GAAGTGGGTTTAAGTCAGACCCCC
AGGGCCATGACCACCAGCCTGCCT
GAAGGGTAGAGAGCAAGCCCAGCT
GGGACCACCAG<3'
(SEQ ID NO:3)

FIGURE 2B